

## **Shoreline Change near the Elwha River - Impacts of Dams and Dam Removal.**

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Dams on the Elwha River of the Olympic Peninsula have reduced sediment transport in the river for almost a century. Following dam removal, which is slated to begin in 2008, over 14 million cubic meters of mixed grain-size sediments will be available to the river from the former reservoirs, some of which is predicted to reach the Strait of Juan de Fuca. Here we describe the history of shoreline evolution along the Elwha River delta and detail monitoring plans to track nearshore changes following dam removal. Historic data document a general trend of erosion along the delta resulting in a net loss of over 65,000 sq. meters of land between 1926 and 1995, although variability in erosion rates is seen over both space and time. Continued monitoring of the shoreface is planned by both U.S. Geological Survey (USGS) and Lower Elwha Klallam Tribe scientists. As part of marine investigations of the Elwha region, USGS scientists have started repeat bathymetric and topographic mapping at over 200 stations using RTK GPS, which show shoreface variability along the littoral cell. Tribal scientists will continue to collect topographic profiles at seven stations across the delta front, which have been monitored twice a year for approximately a decade.